

## Special Report

# Utility Exemption Request for SPAR Water System Project



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Public Works

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#### Introduction

The SPAR Water System Project has been in the City's Capital Improvement Program (CIP) for over 5 years. Design is now approaching completion on Phase 1 of the Program, which includes the water transmission mains and booster pump station. Phase 2, including a reservoir, is expected to be implemented in the mid- to late-2020s.

A complete description of the project is included in the Predesign Report (Kennedy/Jenks Consultants, 2015). A Critical Areas Report and Mitigation Plan (ESA, 2018) has been submitted to the City's Development Services Department for review. Simultaneously, various WSDOT approvals and King County Parks and Trails agreements have been obtained.

On November 30, 2018, the City permit manager indicated the following regarding the Critical Areas Variance or Variance Exemption:

"The Development Services Department believes the project may qualify for an exemption under [IMC 18.10.420 Public agency and utility exemption](#). In short, the Public Works Engineering Department must prepare a formal report requesting the exemption to be reviewed concurrent with the ASDP and SEPA Checklist. Please see Chapter 18.10.420 for information relating to the required elements of the report."

Chapter 18.10.420 of the Issaquah Municipal Code (IMC) is written as follows:

#### **18.10.420 Public agency and utility exemption**

*A. This section only applies to development proposals not qualifying under IMC [18.10.400](#). If the application of this chapter would prohibit a development proposal by a public agency or public or private utility, the agency or utility may apply for an exception pursuant to this section. The exemption shall be reviewed through the appropriate land use permitting process or if none is required, then through Level 1 Review. The agency or utility shall prepare a report requesting the exemption and submit it to the Permit Center and shall incorporate other required documents such as land use or Building Permit applications, critical areas studies and SEPA documents.*

*B. The Director shall review the report and applications and make the final decision to approve, approve with conditions or deny the exemption based on the following criteria:*

1. *There is no other practical alternative to the proposed development with less impact on the critical area; and*
2. *The proposal minimizes the impact on critical areas; and*
3. *Mitigation measures are proposed as needed to avoid any significant adverse impacts to the critical area.*

*C. This exemption shall not allow the use of the following critical areas for regional retention/detention facilities except where there is a clear showing that the facility is required to protect public health and safety or to repair damaged natural resources including:*

1. *Class 1 streams or buffers covered by the City's Shoreline Management Program;*
2. *Category I or II wetlands or their buffers with federal or state threatened or endangered plant species; and*
3. *Category I or II wetlands or their buffers which provide critical or outstanding actual habitat for the following unless the applicant clearly demonstrates that there would be no adverse impact on critical or outstanding actual habitat for:*
  - a. *Species listed as endangered or threatened by the federal or state government,*
  - b. *Washington Department of Fish and Wildlife priority species,*
  - c. *Hérons,*
  - d. *Raptors,*
  - e. *Salmonids and salmon habitat.*

*(Ord. 2669 § 1 (Exh. A), 2013; Ord. 2301 § 3, 2001; Ord. 2108 § 10.2.9, 1996).*

## Compliance Information to Address Each Requirement

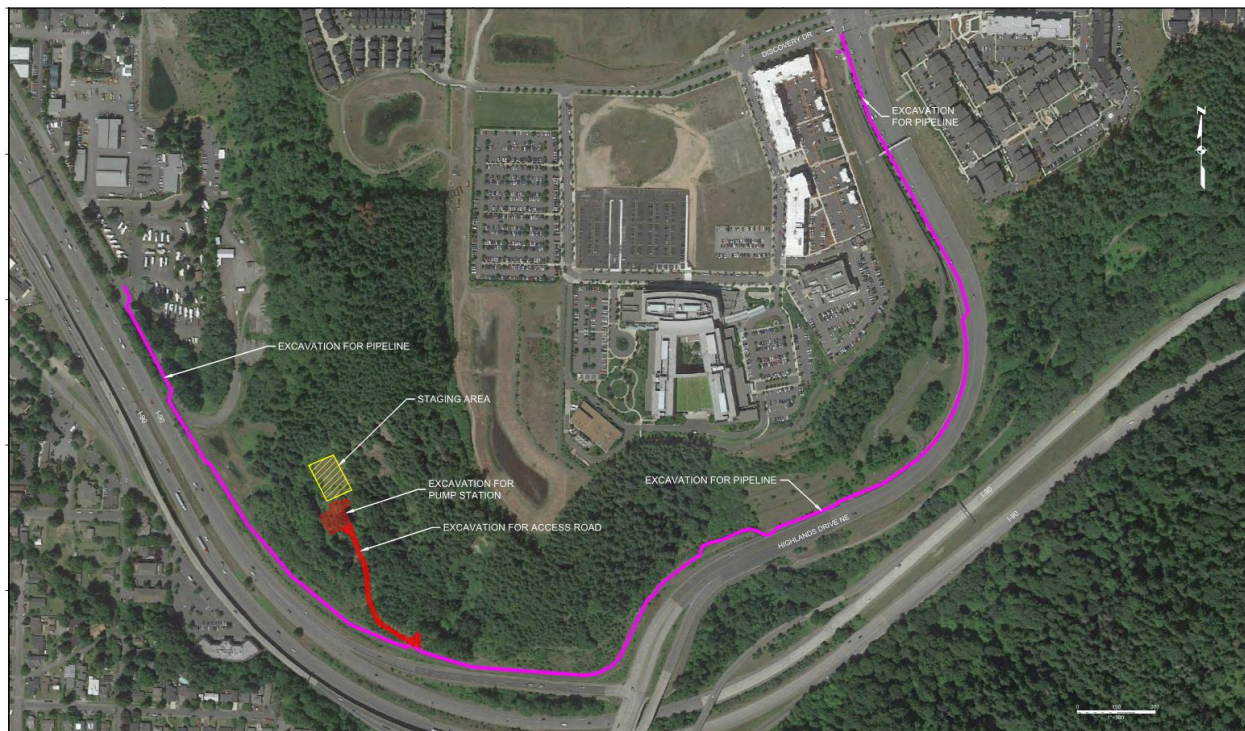
The following information provides the basis for requesting the utility exemption offered by IMC Chapter 18.10.420.

**Requirement A. The Utility Exemption only applies to development proposals not qualifying under IMC 18.10.400.**

None of the exemptions specified under IMC 18.10.400 apply to this project.

**Requirement B1. There is no other practical alternative to the proposed development with less impact on the critical area**

The location of the proposed facilities, including the water mains, access road, pump station and (Phase 2) reservoir, is shown on **Figure 1**. This location is the only feasible location of the proposed facilities. The water transmission piping must be located in an area where it can be connected to the existing distribution piping in the Issaquah Highlands. Locations south of I-90 are infeasible and areas farther north have conflicts or are too close to the existing water transmission piping to allow redundancy.



**Figure 1 – Site Plan Showing Location of Proposed Facilities**

The future reservoir must be located such that the water level in the reservoir is consistent with the hydraulic grade line of other reservoirs in the system, which is elevation 297. The selected location is the only feasible location that would meet this requirement. The selected location is served by an existing access road, with planned improvements including widening the roadway, paving, and stormwater management.

The reservoir and pump station sites have been evaluated by the project geotechnical engineer which recommended construction within a Landslide Hazard Area and an appropriate buffer from Steep Slope Hazard Areas for these facilities. The water line and access road are situated within the buffer of Slope

Hazard Areas that have previously been legally graded (the Preston-Issaquah Trail, Highlands Drive Trail and the existing access road. Specific mitigations related to earthwork and drainage have been developed by the geotechnical engineers that should maintain or enhance the stability of the Landslide or Steep Slope Hazard Areas.

Finally, City operations and maintenance crews will need access to the pump station and reservoir for routine and non-routine operations and maintenance. Use of a portion of the Preston Trail and a gravel access road (which will be paved) from the trail to the site is the only feasible access option for this purpose. Other options would pose unacceptable grade and land disturbance, including construction on steep slopes, significant grading, excavation, and shoring, and construction of a new access road.

#### **Requirement B2. The proposal minimizes the impact on critical areas**

The following discussion regarding proposed mitigation measures is taken in part from Section 7 of the *South SPAR Booster Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2018a) and in part from the *Tree Mitigation Plan - SPAR Reservoir and Pump Station* (2018b).

The City of Issaquah requires project applicants to demonstrate that all reasonable efforts have been made to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, the applicant must follow the mitigation sequencing process to first avoid and minimize impacts before proposing compensatory mitigation (IMC 18.10.490). The project was designed to avoid and minimize impacts to wetlands, streams, and their buffers in accordance with the following preferred sequence of mitigation:

1. Avoid impacts altogether by not taking a certain action or parts of an action;
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

The project has been designed to completely avoid direct impacts to wetlands and streams and to reduce buffer impacts to the extent practicable given the topography constraints and presence of an existing unimproved road. Although the site contains steep slopes that limit design options away from critical area buffers, the project was designed to minimize buffer impacts while also minimizing project impacts on steep slopes and mature trees. The roadway for pump station access was specifically designed to utilize existing road (where vegetation is cleared and buffers are already degraded) where feasible, thereby minimizing critical area impacts.

Several redesigns have occurred during the life of the project, with the goal of reducing impacts to critical areas. The initial, preliminary design would have resulted in temporary stream impacts, based on the proximity of Stream 3 to the existing dirt road. Therefore, project plans were adjusted to avoid temporary and permanent impacts to Stream 3. The Project was also redesigned to avoid direct impacts to Wetland B, and to minimize Wetland B buffer impacts by shifting the road and pump station building west of the previously planned location, away from Wetland B. These design changes resulted in a project that has no direct impacts to any project area wetlands (Wetland A, B, and C) or streams (Stream 1, 2, and 3). In addition, project impact footprint was moved slightly after initial design, to minimize clearing of larger trees in the vicinity of the pump station.

However, even with these changes, some impacts to wetland and stream buffers cannot be completely avoided. Project construction will result in approximately 9,519 square feet of temporary impacts and 17,678 square feet of permanent impacts to wetland and stream buffers. Specifically, construction impacts encroach into the regulated buffers of Wetland B, Wetland C, Stream 2, and Stream 3 (see Figures 4 and 5 of the *Critical Areas Report*). Buffer impacts primarily include grading and paving of the existing gravel road. Most of this area is currently cleared but the road will be widened slightly to facilitate Fire Department access, as required by City Road Design Standards.

In addition, the project will have unavoidable impacts to 52 significant trees (defined as  $\geq 6$  inches diameter breast height) due to clearing for the roadway and pump station. All 33 coniferous trees requiring removal are Douglas fir (*Pseudotsuga menziesii*), while 19 deciduous trees will be removed, consisting of red alder (*Alnus rubra*) and black cottonwood (*Populus trichocarpa*).

**Requirement B3. Mitigation measures are proposed as needed to avoid any significant adverse impacts to the critical area.**

When an alteration to a critical area is proposed (after avoidance and minimization measures have been implemented), the applicant must follow a mitigation sequence proposing compensatory mitigation (IMC 18.10.490). In order to offset impacts within wetland and stream buffers and impacts to significant trees, the proposed project has used these guidelines in developing appropriate mitigation measures:

- Rectify impacts by repairing, rehabilitating or restoring the affected environment;
- Compensate for the impact by replacing, restoring, creating, enhancing or providing substitute resources or environments; and
- Monitor the impact and the compensation projects and taking appropriate corrective measures.

A complete description of the proposed mitigation measures for both stream and wetland buffers, including plan sheets, mitigation planting palettes, planting specifications, performance standards, monitoring plans, reporting requirements, and contingency plans is detailed in the *South SPAR Booster Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2018a). Similar information for tree mitigation is provided in the *Tree Mitigation Plan - SPAR Reservoir and Pump Station* (2018b). A summary of proposed mitigation is provided below.

Stream and Wetland Buffer Mitigation

The overall goal of the wetland and stream buffer mitigation is to replace the habitats and functions lost or altered as a result of the Project. Proposed mitigation activities are designed to compensate for these functional impacts. Wetland and stream buffers reduce sediment and nutrients from entering the wetlands and streams, improve temperature moderation, increase plant species diversity, provide wildlife habitat, and deter human disturbance of these resources. Restoring a more native vegetation community to the aquatic area buffers would improve all of these functional attributes of the buffers and provide additional protection to the adjacent wetland and stream systems.

Issaquah Municipal Code 18.10.650 – Exceptions to wetland buffer width requirements, and IMC 18.10.790 - Exceptions to stream buffer width requirements, do not require wetland buffer impacts to be mitigated at a specific mitigation ratio; however, buffer mitigation for Wetland B, Wetland C, Stream 2, and Stream 3 would be implemented at a 1:1 mitigation ratio (Wetland A is less than 2,500 square



feet and therefore, no buffer is required per IMC 18.10.720(B)(3); additionally, no construction is proposed within approximately 100 feet of Wetland A.

The project proposes 20,259 square feet of wetland/stream buffer enhancement within the existing buffers of Wetlands B and C and Stream 3. The buffer enhancement will serve to mitigate the 17,678 square feet of permanent buffer impacts. The proposed buffer mitigation would provide a mitigation ratio of greater than 1:1, exceeding IMC requirements. Specific mitigation goals include the following:

- Enhance approximately 20,259 square feet of existing wetland and stream buffer through the removal of invasive species and quarry spall, and the planting of native trees and shrubs.
- Restore to pre-construction conditions (contours and conditions) all temporarily disturbed wetland buffer and stream buffer (9,519 square feet) through planting of native shrubs and grasses. In addition, areas of bare earth (approximately 6,200 square feet) within the permanent impact area will be stabilized through planting of native grass hydroseed.

Mitigation for permanent wetland and stream buffer impacts would occur in the form of buffer enhancement. The proposed enhancement area was selected for its degraded condition and high potential for buffer function improvement, and its location relative to the wetland and stream system and proposed development. Enhancement measures would include the removal of all invasive, non-native vegetation (primarily Himalayan blackberry and Scotch broom) and quarry spall, and planting of appropriate native shrub and tree species (Figures 5 through 8 of the *Critical Areas Report*). The buffer enhancement will serve to mitigate the 17,678 square feet of permanent buffer impacts. The proposed buffer mitigation would provide a mitigation ratio of greater than 1:1, exceeding IMC requirements.

In addition, areas with temporary wetland and stream buffer impacts will be restored to original grade and revegetated with native vegetation (grasses and shrubs) after construction activities are completed, in accordance with IMC 18.10.610(D) (see Figures 6 through 9 of the *Critical Areas Report*).

Based on the proposed mitigation actions to offset permanent and temporary wetland and stream buffer impacts, no net loss of ecological buffer function is anticipated considering the degraded condition of the existing buffers within the proposed development area and the proposed enhancement activities. In accordance with IMC 18.10.760(F), monitoring and maintenance will occur for a five-year period post-construction to ensure the enhancement area meets the performance standards detailed in *Critical Areas Report*. In addition, a maintenance, contingency plan, and site protection measures will be implemented for the stream and wetland mitigation.

#### Tree Removal Mitigation

Clearing of significant trees requires approval and the site must meet the minimum City tree density standards. City code (IMC 18.12.1370) requires that if any tree removal occurs within Facilities zoned areas (which includes the project area), the post-project site meet minimum tree density requirements of 4 significant trees per 5,000 square feet, with the density calculation based on developable site area of the lot(s).

Although the project would meet City code without additional tree planting, the project requires City of Issaquah acquisition of two land parcels (Parcel Numbers 272406-9126 and 527910-0850) currently owned by the Washington State Department of Transportation (WSDOT). This acquisition requires that

the project adhere to the WSDOT (2015) *Roadside Policy Manual*, which required tree replacement of moderate-size coniferous and other late successional tree species (>6-inches). Replacement ratios are given as one 1-gallon replacement tree for each 1-inch of trunk diameter, or, if larger container sizes (2-gallon container plants) are used, the plant quantity will be adjusted to a ratio of 0.5 2-gallon replacement trees for each 1-inch of trunk diameter.

Therefore, all applicable trees that are cleared within the project area will be replaced at WSDOT's *Roadside Policy Manual* ratios. Tree planting will occur on-site and will be preceded by the removal of existing blackberry patches. Tree plantings will occur in both unvegetated areas as well as within existing forested areas.

In order to meet City and WSDOT requirements for tree replacement, the project will plant a total of 300 Douglas fir trees within the project area over an approximate area of 40,000 square feet (see Figures 3 and 4 in the *Tree Mitigation Plan*). This action will offset impacts from removal of 33 coniferous trees, equating to a tree replacement ratio of greater than 9:1. The 300 Douglas fir trees will be a combination of two tree sizes, 1-gallon containers and 2-gallon containers. This combination meets WSDOT requirements to offset total project impacts to conifers (400-inches dbh) (see *Tree Mitigation Plan*). Douglas fir was selected as an appropriate species for mitigation because, 1) all surveyed coniferous trees that will be cleared for the project are Douglas fir, and 2) the forest immediately adjacent to the project site is dominated by this coniferous species.

In addition to offsetting impacts to coniferous tree species, the tree planting plan also includes planting of deciduous species. Approximately 100 containers of bigleaf maple (*Acer macrophyllum*) will be installed on the project site, with an equal mix of 1-gallon and 2-gallon containers. The planting equals a tree replacement ratio of 5:1. Bigleaf maple was selected as an appropriate species for mitigation as it is shade tolerant, as planting of this species in existing conifer forest will eventually provide an ecologically beneficial understory to help promote growth of an understory.

Note that the tree mitigation is in addition to the planting of 141 one-gallon coniferous and 93 1-gallon deciduous trees within the Buffer Mitigation Site, as outlined in the *SPAR Reservoir and Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2018). The proposed tree planting will offset impacts to ecological functions and values provided by the removed trees and will meet WSDOT and City standards for tree replacement.

Monitoring and maintenance will occur for a three-year period post-construction to ensure the enhancement area meets the performance standards detailed in *Tree Mitigation Plan*. In addition, a maintenance, contingency plan, and site protection measures will be implemented for the tree mitigation.

**Requirement C.** This exemption shall not allow the use of certain critical areas for regional retention/detention facilities.

This project is not a regional retention/detention facility, so this prohibition does not apply.



## Summary and Conclusions

The Special Report - Utility Exemption Request for SPAR Water System has clearly demonstrates that the project meets all requirements of a utility exemption, as detailed in IMC Chapter 18.10.420. The information provided in this report, supported by various consultant reports, fully documents the basis for the exemption request. A revised SEPA checklist for the project was submitted on February, 8, 2021.